CLAIMS

What is claimed is:

1. A circuit for use in an RFID tag, comprising:

a first RF port for receiving a first signal;

a second RF port for receiving a second signal;

a signal combiner for generating a combined signal from the first received signal and the second received signal; and

an analog to digital converter for generating a digital signal from the combined signal.

2. The circuit of claim 1, wherein

the first received signal has a different polarization than the second received signal.

3. The circuit of claim 1, wherein the signal combiner includes

a first envelope detector for generating a first processed signal from the first received signal,

a second envelope detector for generating a second processed signal from the second received signal, and

an adder to generate the combined signal from the first processed signal and the second processed signal.

4. The circuit of claim 3, wherein

the adder is adapted to add together the first processed signal and the second processed signal.

5. The circuit of claim 3, wherein

the first envelope detector includes an AC diode.

6. The circuit of claim 3, wherein

the adder includes a node.

7. The circuit of claim 6, further comprising:

a capacitor coupled to the node.

8. The circuit of claim 7, further comprising:

a discharging component for discharging the capacitor.

9. The circuit of claim 8, wherein

the discharging component includes one of a resistor, a current source, and a transistor.

10. The circuit of claim 1, wherein

the analog to digital converter includes a peak detector to detect peaks of the combined signal.

11. The circuit of claim 1, wherein

the analog to digital converter includes a comparator.

12. A device for use in an RFID tag comprising:

means for generating a combined signal from a first signal received at a first RF port and a second signal received at a second RF port; and

means for generating a digital signal from the combined signal.

13. The device of claim 12, wherein

the first received signal has a different polarization than the second received signal.

14. The device of claim 12, wherein

the means for generating the digital signal comprises:

means for detecting peaks from the combined signal, and

means for comparing a version of the combined signal to a version of the detected peaks.

15. The device of claim 12, wherein

the means for generating the digital signal comprises:

means for detecting an average value of the combined signal, and

means for comparing a version of the combined signal to a version of the detected average value.

16. The device of claim 12, further comprising:

means for generating a first processed signal from the first received signal, and

wherein the first processed signal is used to generate the combined signal.

17. The device of claim 16, wherein

the means for generating the first processed signal includes an envelope detector.

18. The device of claim 16, further comprising:

means for generating a second processed signal from the second received signal, and

wherein the second processed signal is used to generate the combined signal.

19. The device of claim 18, wherein

the means for generating the digital signal includes an adder.

20. A method for using a circuit of an RFID tag, comprising:

receiving a first signal at a first RF port;

receiving a second signal at a second RF port;

generating a combined signal from the first received signal and the second received signal; and

generating a digital signal from the combined signal.

21. The method of claim 20, wherein

the first received signal has a different polarization than the second received signal.

22. The method of claim 20, wherein

the digital signal is generated by

detecting peaks from the combined signal, and

comparing a version of the combined signal to a version of the detected peaks.

23. The method of claim 20, wherein

the digital signal is generated by

detecting an average value of the combined signal, and

comparing a version of the combined signal to a version of the detected average value.

24. The method of claim 20, further comprising:

generating a first processed signal from the first received signal; and

using the first processed signal to generate the combined signal.

25. The method of claim 24, wherein

generating the first processed signal is performed by detecting an envelope of the first received signal.

26. The method of claim 24, further comprising:

generating a second processed signal from the second received signal; and

using the second processed signal to generate the combined signal.

27. The method of claim 26, wherein

combining is performed by adding together the first processed signal and the second processed signal.

28. The method of claim 26, wherein

the combined signal is generated at a node.